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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/053,040	04/01/1998	ISAO KUDO	KANHA3111.01	9807

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[REDACTED] EXAMINER

FRECH, KARL D

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

7876

DATE MAILED: 12/13/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/053,040	KUDO, ISAO
Examiner	Art Unit
Karl D Frech	2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 18 October 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-21 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) Interview Summary (PTO-413) Paper No(s) _____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____

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1. The amendment received October 18, 2001 has been entered as paper number 17. By this response claims 1,4,6,7,9,10,14,16,17,18,21 and the specification have been amended.

2. The amendment filed October 18, 2001 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the element of a "matrix code" has been substituted for all instances of the previous element of a "barcode".

Applicant is required to cancel the new matter in the reply to this Office action.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-21 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. As seen above, there is no support for the new element of a "matrix code".

5. Note: It is noted on the bottom of page 16 of the amendment of October 18, 2001, applicant provides a marked up copy of a portion of the specification where it is suggested by applicant that "...provided that is characterized in that a two-dimensional [bar]code or matrix code pattern for information...". It is pointed out that in this passage "or matrix code" is not

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underlined as indicating added matter. However, upon review of the originally filed specification, this "or matrix code" is not seen in the associated paragraphs of page 5 of the original specification. As there is no other suggestion within the amendment of October 18, 2001, nor can the examiner find any other indication of the matrix code within the originally filed specification or claims, the examiner holds the "matrix code" to be new matter.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merlin et al in view of Shamir and Wang et al 5,659,167. Merlin teaches a semiconductor device 1 having some mark patterns thereon 20 for information management provided at each of chips arrayed on a wafer surface (11,12,13) as chip ID information wherein the chip ID information includes chip information inherent to each chip. Merlin teaches of marking the wafer surface with one or more indicia, he is silent with respect to the ID information to be in a two-dimensional bar code pattern. Shamir teaches an IC wafer including a micro-bar coded indicia 128 and an alphanumeric indicia 130 for identification and for inventory purposes. It would have been obvious to person of ordinary skill in the art at the time the invention was made to replace the codes of Merlin with the micro-bar codes of Shamir. This would be an obvious design choice driven by the ability of bar coded indicia to contain vast amounts of information. One of ordinary skill in the art at the time

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the invention was made would employ the conventional means for chip ID information is projected and exposed using a liquid crystal mask that is capable of changing light transmitting pattern for each exposure to the teachings of Merlin and Shamir in order to provide Merlin and Shamir with a more secure system/device wherein the ID information cannot be detected by the naked eye. Furthermore, to record ID information as discussed above would have been an alternative means for recording data/information onto the wafer surface, and therefore an obvious expedient as taught by Merlin and Shamir. Although Merlin and Shamir teaches the means for encoding the ID information on the wafer surface of the semiconductor device, Merlin and Shamir are silent with respect to means for providing ID information on a lead frame and/or outer surface of a resin-sealed semiconductor chip. However, one of ordinary skill in the art at the time the invention was made would have contemplated in placing /recording ID information on a semiconductor device on each chip, either on the chip itself or on the lead frame, outer surface of a resin-sealed semiconductor device due to the fact that such a modification would have constituted an alternative means for placing/recording the two dimensional bar code patterns on a semiconductor device at different locations, and therefore would have constituted an obvious design variation, failing to provide any unexpected results, well within the ordinary skill in the art. With respect to the two-dimensional bar code pattern is formed by means of photolithography. applicant admits as seen in the response of 4/2/01 that photolithography in such an environment is known and used. It would have been obvious to a person of ordinary skill in the art at the time of

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the invention to use photolithography in order to utilize existing infrastructure and thus cut cost of production.

Merlin and Shamir do not disclose the matrix code as now claimed. Wang et al disclose, as specifically seen in column 8 lines 15+, the interchange ability between two dimensional bar codes and matrix codes for containing information in record form. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a known matrix code in place of the two dimensional bar code of Merlin and Shamir. This would allow for alternate existing codes to be used thus utilizing existing reading apparatus of various configurations, i.e. expand the arena of use of the coded semiconductor device.

8. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl Frech whose telephone number is (703) 305-3491. The examiner's supervisor is Michael Lee whose telephone number is (703)305-3503. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center receptionist whose telephone number is (703)308-0956. The Tech Center fax number is (703) 308-7722.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [karl.frech@uspto.gov]. All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.



Karl D. Frech
Primary Examiner, AU 2876
December 10, 2001